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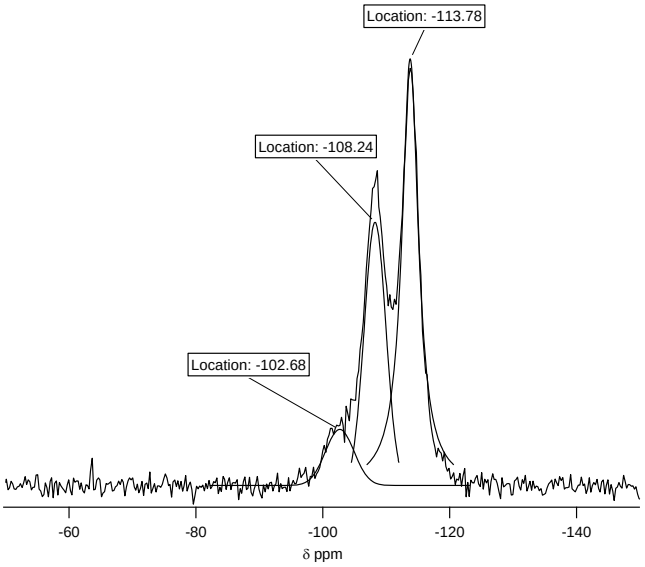
High-Silica, Heulandite-Type Zeolites Prepared by Direct Synthesis and Topotactic Condensation

Joel E. Schmidt[a], Dan Xie[b] and Mark E. Davis*[a]

[a]Chemical Engineering, California Institute of Technology, Pasadena, CA 91125, USA. Email: mdavis@cheme.caltech.edu
[b]Chevron Energy Technology Company, Richmond, CA 94802, USA.

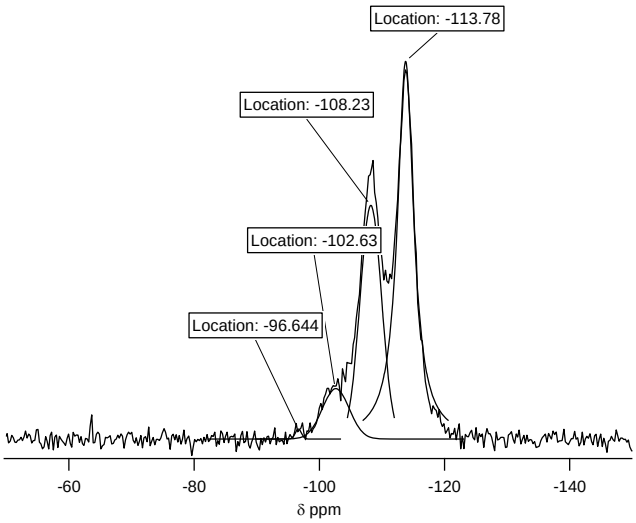
Deconvolution of CIT-8 ^{29}Si MAS NMR.



Peak location	Normalized Area	Coordination
-113.78	1.00	$Si(OSi)_4$
-108.24	0.54	$Si(OAl)(OSi)_3$
-102.68	0.15	$Si(OAl)(OSi)_3$

The Si/Al ratio was found to be 9.8.

Deconvolution of the CIT-8 ^{29}Si MAS NMR including a $Si(OAl)_2(OSi)_2$ resonance that was found to be insignificant



Peak location	Normalized Area	Coordination
-113.78	1.00	$Si(OSi)_4$
-108.23	0.545	$Si(OAl)(OSi)_3$
-102.63	0.147	$Si(OAl)(OSi)_3$
-96.644	0.007	$Si(OAl)_2(OSi)_2$

The Si/Al ratio was found to be 9.8.

Silanol Calculation

There are 5 crystallographic unique T sites in **HEU**. T-2 atoms are the only ones exposed to the surface of the layer. The multiplicity of the 5 unique T atoms are:
T1 = 8; T2 = 8; T3 = 8; T4 = 8; T5 = 4.
So, ideally, there are T2 / (T1+T2+T3+T4+T5) = 8/36 = 22.22% silicon atoms as silanols